

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Serial No. : 09/943,562  
Applicant : Doyle et al.  
Filed : August 30, 2001  
Title : EFFICIENTLY SERVING LARGE OBJECTS  
IN A DISTRIBUTED COMPUTING NETWORK  
Docket No. : RSW920010161US1/IBM029PA  
Examiner : K. Divecha  
Art Unit : 2451  
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**APPELLANT'S AMENDMENTS TO THE**  
**BRIEF ON APPEAL UNDER 37 C.F.R. §41.37**

Sir:

These Amendments are filed pursuant to the "Notice of Appeal to the Board of Patent Appeals and Interferences", filed August 13, 2007, the Notice of Panel Decision from Pre-Appeal Brief Review, mailed November 13, 2007 and the Notification of Non-Compliant Appeal Brief mailed April 17, 2009. These Amendments to the Appeal Brief provide a heading for the Arguments section and revisions to the Summary of Claimed Subject matter that cite to the specification by page and line number.

Please replace the Summary of Claimed Subject Matter in the Appeal Brief filed Dec. 13, 2007 with the following replacement Summary of Claimed Subject Matter. The only changes herein are to replace reference to the appellant's published patent application in the original filed Appeal Brief with corresponding cites to the Appellant's specification page and line numbers.

### **Summary of Claimed Subject Matter**

The claimed invention is directed to providing techniques for improving the serving of content in a distributed computing network that includes an intelligent storage system by reducing the processing load and network traffic on Web servers in the network path, allowing such Web servers to operate more efficiently and to serve more requests. As an example, client requests for content meeting predefined criteria (or criterion) may be served from an intelligent storage device in a manner that eliminates an associated Web server from the return path<sup>1</sup>.

***Independent claim 45*** is directed to a method of serving objects in a computing network, (See for example, appellant's specification page 1, lines 5 and 6; page 18, lines 14-19; page 28, lines 11-20) the method comprising:

receiving a request from a sender for an object stored on an intelligent storage system, the request being received by a web server (See for example, appellant's specification page 18, lines 14-19; page 24, lines 5-15; Fig. 8-Blocks 800 and 810, Fig. 10-Block 1000), and the intelligent storage system comprising a control unit configured to determine a mapping for the requested object to a location on an associated storage device (See for example, appellant's specification page 5, line 6 through page 6, line 9; page 6, lines 10-20; Fig. 2 );

evaluating the request for the object based upon at least one predetermined criterion (See for example, appellant's specification page 19, line 20 through page 22, line 9; Fig. 9-Block 900, Fig. 11-Block 1105);

returning a response message from the web server to the sender if the at least one predetermined criterion is met, wherein the response message includes a location of the object on the associated storage device of the intelligent storage system (See for example, appellant's specification page 19, lines 2-4; page 24, line 16 through page 25, line 6; Figs. 8, 9-Block 910,

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<sup>1</sup> See for example, appellant's specification, page 13, line 10-page 14, line 1; Abstract.

Fig. 11-Blocks 1110 and 1115), and the sender utilizes the response message to obtain the object in a manner that bypasses the web server for outbound traffic from the intelligent storage system to the client (See for example, appellant's specification page 19, lines 5-9; page 24, lines 5-15; page 24, line 16 through page 25, line 6; Figs. 8, 10); and

serving the stored object from the intelligent storage system to the sender via the web server if the at least one predetermined criterion is not met (See for example, appellant's specification page 25, lines 10-19; Fig. 11-Blocks 1120, 1125, 1130, 1135, 1140, 1145, 1150).

***Independent claim 74*** is directed to a method of creating a link to an object (See for example, appellant's specification page 14, line 12 through page 18, line 9; page 28, lines 11-20), the method comprising:

receiving a request for a particular object (See for example, appellant's specification page 18, lines 14-19; page 24, lines 5-15; Fig. 8-Blocks 800 and 810, Fig. 10-Block 1000) that is stored in an intelligent storage system comprising a control unit configured to determine a mapping for the requested object to a location on an associated storage device (See for example, appellant's specification page 5, line 6 through page 6, line 9; page 6, lines 10-20; Fig. 2);

evaluating at least one characteristic of the particular object (See for example, appellant's specification page 19, line 20 through page 22, line 9; Figs. 9-Block 900, Fig. 11-Block 1105);

retrieving a redirect file that instructs a web server receiving the request to return a response message including the location of the requested object on the associated storage device of the intelligent storage system if the at least one evaluated characteristic of the particular object is satisfied (See for example, appellant's specification page 17, line 5 through page 18, line 9; page 24, line 16 through page 25, line 6; Figs. 7, 8, Fig. 11-Blocks 1110 and 1115), the response message being configured to redirect the request to the control unit of the intelligent storage system (See for example, appellant's specification page 13, line 10 through page 14, line 1; page 17, line 5 through page 18, line 9; page 18, lines 14-19; Figs. 7, 8, 12); and

locating an object serving link that is utilized by the web server receiving the request to obtain the object from the intelligent storage system and return the object in response to the request if the evaluated at least one characteristic of the particular object is not satisfied (See for example, appellant's specification page 25, lines 10-19; Fig. 11-Blocks 1120, 1125, 1130, 1135, 1140, 1145, 1150).

***Independent claim 82*** is directed to a system for serving objects in a computing network (See for example, appellant's specification page 1, lines 5 and 6; page 18, lines 14-19; page 28, lines 11-20), comprising:

an intelligent storage system comprising a control unit configured to determine a mapping for a request for an object to a location on an associated storage device (See for example, appellant's specification page 5, line 6 through page 6, line 9; page 6, lines 10-20; Fig. 2); and

a web server configured to receive the request by a sender for an object stored on the intelligent storage system (See for example, appellant's specification page 18, lines 14-19; page 24, lines 5-15; Fig. 8-Blocks 800 and 810, Fig. 10-Block 1000 ), the web server being configured to evaluate the request based on at least one criterion (See for example, appellant's specification page 19, line 20 through page 22, line 9; Figs. 9-Block 900, Fig. 11-Block 1105), and if the at least one criterion is met, returning a response message to the sender to redirect the request to the control unit of the intelligent storage system, wherein the redirect code includes a location of the object on the associated storage device of the intelligent storage system, (See for example, appellant's specification page 19, lines 2-4; page 24, line 16 through page 25, line 6; Figs. 8, 9-Block 910, Fig. 11-Blocks 1110 and 1115) and the sender utilizes the response message to obtain the object in a manner that bypasses the web server for outbound traffic from the intelligent storage system to the client without transferring a corresponding session between the web server and the sender to a different web server (See for example, appellant's specification page 19, lines 5-9; page 24, lines 5-15; page 24, line 16 through page 25, line 6; Figs. 8, 10) and if the at least one criterion is not met, to serve the stored object via the web server (See for example, appellant's specification page 25, lines 10-19; Fig. 11-Blocks 1120, 1125, 1130, 1135, 1140, 1145, 1150).

***Independent claim 86*** is directed to a system for creating a link to an object (See for example, appellant's specification page 14, line 12 through page 18, line 9; page 28, lines 11-20), the system comprising:

an intelligent storage system comprising a control unit configured to determine a mapping for a request for a particular object to a location on an associated storage device (See

for example, appellant's specification page 5, line 6 through page 6, line 9; page 6, lines 10-20; Fig. 2);

a web server configured to receive the request for the particular object (See for example, appellant's specification page 18, lines 14-19; page 24, lines 5-15; Fig. 8-Blocks 800 and 810, Fig. 10-Block 1000) and to evaluate at least one characteristic of the particular object (See for example, appellant's specification page 19, line 20 through page 22, line 9; Figs. 9-Block 900, Fig. 11-Block 1105);

wherein the web server is configured to retrieve a redirect file that instructs the web server receiving the request to return a response message including the location of the particular object on the associated storage device of the intelligent storage system (See for example, appellant's specification page 17, line 5 through page 18, line 9; page 24, line 16 through page 25, line 6; Figs. 7, 8, Fig. 11-Blocks 1110 and 1115), the response message being configured to redirect the request to the control unit of the intelligent storage system if the at least one evaluated characteristic of the particular object is met (See for example, appellant's specification page 13, line 10 through page 14, line 1; page 17, line 5 through page 18, line 9; page 18, lines 14-19; Figs. 7, 8, 12), and to locate an object serving link that is utilized by the web server receiving the request to obtain the particular object in response to the request if the evaluated characteristic of the particular object is not met (See for example, appellant's specification page 25, lines 10-19; Fig. 11-Blocks 1120, 1125, 1130, 1135, 1140, 1145, 1150).

***Independent claim 87*** is directed to a computer program product for serving objects in a computing network (See for example, appellant's specification page 1, lines 5 and 6; page 18, lines 14-19; page 28, line 11 through page 29, line 11), the computer program product comprising:

a computer readable medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code configured to receive a request for an object stored on an intelligent storage system, the request being received by a web server (See for example, appellant's specification page 18, lines 14-19; page 24, lines 5-15; Fig. 8-Blocks 800 and 810, Fig. 10-Block 1000), and the intelligent storage system comprising a control unit configured to determine a mapping for the requested object to a location on an associated storage device (See

for example, appellant's specification page 5, line 6 through page 6, line 9; page 6, lines 10-20; Fig. 2);

computer readable program code configured to evaluate the request based on at least one criterion (See for example, appellant's specification page 19, line 20 through page 20, line 9; Figs. 9-Block 900, Fig. 11-Block 1105);

computer readable program code configured to return a response message from the web server to a sender if the at least one predetermined criterion is met, wherein the response message includes a location of the object on the associated storage device of the intelligent storage system (See for example, appellant's specification page 19, lines 2-4; page 24, line 16 through page 25, line 6; Figs. 8, 9-Block 910, Fig. 11-Blocks 1110 and 1115), and the sender utilizes the response message to obtain the object in a manner that bypasses the web server for outbound traffic from the intelligent storage system to the client without transferring a corresponding session between the web server and the sender to a different web server (See for example, appellant's specification page 19, lines 5-9; page 24, lines 5-15; page 24, line 16 through page 25, line 6; Figs. 8, 10); and

computer readable program code configured to serve the stored object via the web server if the at least one criterion is not met (See for example, appellant's specification page 25, lines 10-19; Fig. 11-Blocks 1120, 1125, 1130, 1135, 1140, 1145, 1150).

***Independent claim 96*** is directed to a computer program product for creating a link to an object (See for example, appellant's specification page 14, line 12 through page 18, line 9; page 28, line 11 through page 29, line 11), the computer program product comprising:

a computer readable medium having computer readable program code embodied therein, the computer readable program code comprising:

computer readable program code configured to receive a request for a particular object (See for example, appellant's specification page 18, lines 14-19; page 24, lines 5-15; Fig. 8-Blocks 800 and 810, Fig. 10-Block 1000) in an intelligent storage system comprising a control unit configured to determine a mapping for the requested object to a location on an associated storage device (See for example, appellant's specification page 5, line 6 through page 6, line 9; page 6, lines 10-20; Fig. 2); computer readable program code configured to evaluate at least

one characteristic of the particular object (See for example, appellant's specification page 19, line 20 through page 22, line 9; Figs. 9-Block 900, Fig. 11-Block 1105);

computer readable program code configured to retrieve a redirect file that instructs a web server receiving the request to return a response message including the location of the particular object on the associated storage device of the intelligent storage system (See for example, appellant's specification page 17, line 5 through page 18, line 9; page 24, line 16 through page 25, line 6; Figs. 7, 8, Fig. 11-Blocks 1110 and 1115), the response message being configured to redirect the request to the control unit of the intelligent storage system if the at least one evaluated characteristic of the particular object is satisfied (See for example, appellant's specification page 13, line 10 through page 14, line 1; page 17, line 5 through page 18, line 9; page 18, lines 14-19; Figs. 7, 8, 12); and

computer readable program code configured to locate an object serving link that is utilized by the web server receiving the request to obtain the object from the intelligent storage system and return the object in response to the request if the at least one evaluated characteristic of the particular object is not satisfied (See for example, appellant's specification page 25, lines 10-19; Fig. 11-Blocks 1120, 1125, 1130, 1135, 1140, 1145, 1150).

Please insert the title “Arguments” above section 1.A. on page 7 of the Appeal Brief filed Dec. 13, 2007 after the section titled Grounds of Rejection To Be Reviewed on Appeal and before the section titled with the reference 1.A. as noted below.

**Grounds of Rejection To Be Reviewed On Appeal**

1. Whether Claims ...
2. Whether Claim 50 is unpatentable ... further in view of *Dillon* ‘463.

**Arguments**

**1. A. Introduction to 35 U.S.C. §103(a) ...**

**Conclusion**

For all of the above reasons, the appellant respectfully submits that the pending claims define patentable subject matter over the applied prior art. Accordingly, it is respectfully requested that the Board reverse the Examiner’s final rejection of claims 45, 46, 48-79, 82-98 and 103-104.

Respectfully submitted,  
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